approximately 26 ports.[105] Verizon's interoffice dedicated transport cost study, however, assumes only 16 ports per node, understating the number of required ports in its cost study by 38.5%.[106]

Q. HOW DID VERIZON MAKE ITS FLAWED CALCULATION OF INTEROFFICE DEDICATED TRANSPORT COSTS?

A. It appears that Verizon took the 48 DS3s per SONET ring and divided by three nodes (the more conservative of the whole number of nodes comprising the average of 3.79 nodes) and calculated 16 ports. Verizon's flawed methodological approach, however, failed to account for separate entry and exit ports on different nodes on the ring. Thus, if a DS3 uses 16 ports to enter the ring on one node it also needs 16 ports on a separate node to exit the ring for a total of 32 required ports.[107]

---

[105] Mathematically, the 26-port figure is derived as follows: The 3.79 nodes per ring average indicates that Verizon's SONET rings generally have either 3 or 4 nodes per ring. For the 3-node rings, assuming 96 ports are available on the ring, there are on average 32 ports per node (96 ports / 3 nodes). For the 4-node rings, again assuming 96 ports on the ring, there are on average 24 ports per node (96 ports / 4 nodes). Given the average of 3.79 nodes per ring, the 3-node scenario would occur 21 percent of the time and the 4-node scenario 79 percent of the time. Using this distribution to determine the number of ports per node yields a total of 25.68 ports per node (32 * 0.21 + 24 * 0.79). We have rounded this value to 26 ports for our analysis.

[106] Verizon uses a 75 percent fill factor in developing the cost for interoffice dedicated transport. This factor has not been altered in the restated cost study. However, Verizon's understatement of the capacity of the OC-48 is only compounded by this fill factor.

[107] In another proceeding, Verizon has claimed that the forward-looking number of nodes per ring should be six, thereby supporting the 16 ports for node that Verizon was using. (*See* State of New York Public Service Commission, *Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements*, Case 98-C-1357, Workpaper Part C-1 – Section 1.0 to the Panel Testimony of Bell Atlantic – New York on Revised Costs and Rates for Unbundled Network Elements
(footnote continued)

Q. HOW DOES THIS FAILURE TO INCLUDE THE APPROPRIATE NUMBER OF PORTS PER NODE IMPACT VERIZON VA'S COST ANALYSIS?

A. The bulk of the cost associated with SONET rings is fixed based on physically establishing the SONET node. As a result, the vast majority of the investment is incurred whether one DS3 or 48 DS3s are in service at the particular SONET node. In its cost analysis, Verizon averages the total cost of the SONET ring across the number of ports that are available at the SONET node. Under Verizon's cost analysis, the lower the number of ports, the greater the cost; the greater the number of ports, the lower the cost. Thus, the average number of ports per node must be accurately determined so as to not misstate the average investment per port. By understating the number of ports per node by 38.5% for DS3s, Verizon has significantly overstated the investment per DS3 in its cost calculation. As a result, Verizon's claimed interoffice dedicated transport costs are similarly inflated.

---

and Related Wholesale Services, February 24, 2000, p. 6 (line 372). [Exhibit 323 in the New York UNE cost proceeding] This document shows that Verizon did not report that it was using six nodes per ring, but rather 3.79 nodes per ring.) Verizon's claim is simply not plausible. Given the growth in data traffic and related growth in transport necessary to support such traffic, the forward-looking impact on SONET network engineering is to realize *smaller* numbers of nodes per ring – not *larger* number of nodes per ring. It simply is not reasonable for Verizon to argue that the forward-looking number of nodes per ring is higher than approximately 3.79.

Some networks are migrating away from OC-48 transport to OC-192, effectively quadrupling the capacity of the transport network. In doing this, ILECs can increase the number of nodes per ring, but the unit cost per DS3 is significantly reduced as a result of the increased number of ports available in moving from OC-48 to an OC-192 network.

Q. IN YOUR RECALCULATION OF VERIZON'S INTEROFFICE DEDICATED TRANSPORT COSTS, DID YOU USE THE 3-NODE ASSUMPTION USED BY VERIZON?

A. No. This assumption is not consistent with 3.79 nodes per SONET ring average used by Verizon in its cost study. The 3.79 nodes per ring is an appropriate figure that should be used consistently in the Verizon cost study.

Q. DO THE INFLATED DS3 COST CLAIMS AFFECT VERIZON'S CLAIMED COSTS FOR OTHER SPEEDS OF DEDICATED TRANSPORT?

A. Yes, Verizon used the DS3 Dedicated Transport cost study as the basis for the DS1 and DS0 Dedicated Transport cost studies, and this flawed analysis likewise resulted in inflated cost claims for DS1 and DS0 dedicated transport. Consequently, the required correction to Verizon's DS3 Dedicated Transport cost study must also be made in these downstream cost studies. Verizon also made the same type of error in its STS-1 and OC3 Dedicated Transport cost studies. The correct number of ports per node for these speeds of dedicated transport using the approach detailed above for DS3s is 26 and nine, respectively for the STS-1 and OC3 Dedicated Transport cost studies.[108] Instead, Verizon incorrectly used 16 and six, respectively, which substantially inflated its claimed costs.

---

[108] An OC-48 SONET ring has a capacity of 48 STS-1 circuits and thus requires 96 STS-1 ports on the nodes of the SONET ring. An OC-48 SONET ring has a capacity of 16 OC-3 circuits and requires 32 OC-3 ports on the nodes of the SONET rings. An OC-48 SONET ring has a capacity of four OC-12 circuits and requires eight OC-12 ports on the nodes of the SONET rings. The remaining calculations to determine the number of ports per node for the SONET rings are identical to those outlined for the DS3 ports.

Q. COULD YOU PLEASE SUMMARIZE THE IMPACT OF THIS CORRECTION IN VERIZON'S COST STUDY FOR THE VARIOUS FORMS OF DEDICATED TRANSPORT?

A. Yes. The following table sets forth the average investment per port using Verizon's incorrect analysis and the restatement that we have done using appropriate assumptions of the numbers of required nodes and ports for each of the various forms of dedicated transport.[109] The average investment uses the same split between Fujitsu and Lucent equipment as set forth in Verizon's original cost study.

Port Type	Corrected Investment Level for Verizon's Cost Study	Verizon's Claimed Investment Level
OC-48 – OC-3 Ports	$8,828.59	$13,078.47
OC-48 – STS-1 Ports	$2,751.91	$4,351.86
OC-48 – DS3 Ports	$2,730.58	$4,317.20

2. CORRECTION TO PERMIT THE CLEC ELECTION OF DCS

Q. WHAT IS DCS?

A. DCS is an acronym for "Digital Cross-connection System." DCS allows for telecommunications providers to electronically cross connect different speeds of dedicated transport. For example, this piece of equipment allows the telecommunications carrier to take multiple DS1 dedicated transport circuits, entrance facilities, or loops and place them onto a DS3 circuit that can then be

---

[109] Unlike Verizon, which divided three nodes by the 48 DS3s, we used the more accurate 3.79 node average provided by Verizon.

carried to another location. This is also referred to as "grooming." Other technology (*e.g.*, ATM switching) is able to perform many of the same functions as DCS with a much lower level of investment. As such, DCS is normally and economically used when the electronic capability available with DCS can best be put to use (*e.g.*, when many changes are expected in the circuits connecting two locations or when the ability to re-provision circuits across different high speed transport is important). ILECs choose when and where to use DCS in dedicated transport circuits based on cost and performance trade-offs. CLECs should have the same opportunity to make this choice through unbundling.

Q. HOW HAS VERIZON COSTED AND PRICED DCS?

A. Verizon has averaged the cost of DCS into its prices for interoffice transport.

Q. IS THIS APPROPRIATE?

A. No. ILECs choose when and where to use DCS in dedicated transport circuits based on cost and performance trade-offs. With unbundling, CLECs should have the same opportunity to decide when and where to use DCS in dedicated transport circuits.

Q. DID THE FCC FIRST REPORT AND ORDER PROVIDE THAT ILECS SHOULD OFFER DEDICATED TRANSPORT AND DCS SEPARATELY?

A. Yes. The FCC in its *First Report and Order* specifically refers to the unbundling of DCS from dedicated transport:

> Accordingly, we conclude that the section 251(d)(2)(B) requires incumbent LECs to provide access to shared interoffice facilities and dedicated interoffice facilities between the above-identified points in incumbent LECs' networks, including facilities between incumbent LECs'

> end offices, new entrant's switching offices and LEC switching offices, and DCSs. We believe that access to these interoffice facilities will improve competitors' ability to design efficient network architecture, and in particular, to combine their own switching functionality with the incumbent LEC's unbundled loops.[110]

The FCC required that the new entrant be permitted to have access to DCS. Simply giving the CLEC access to the DCS equipment does not allow the ILEC to make its use mandatory and include it as an element in its cost study. The CLEC is free to elect not to purchase this element, as other technology affords other alternatives for accomplishing the same functionality as DCS, in a much less costly manner (*e.g.*, ATM switching).

Q. DOES VERIZON PROVIDE ACCESS TO DCS ON A SEPARATE BASIS ALREADY?

A. Yes. Verizon has a Special Access Tariff (Tariff No. 1) that provides access to DCS functionality known as IntelliMux (see § 7.2.12). This service permits "allows point-to-point rerouting of customer...facilities."[111] Moreover, this tariff states that the price for this DCS functionality is based on the type of port that is acquired – Voice Grade, DS1, or DS3.[112] As such, if the customer wants to connect DS3 Special Access Service to the DCS, the customer must purchase a DS3 network access port at the DCS. In short, this is the appropriate approach to

---

110 *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, FCC *First Report and Order*, FCC Docket No. 96-325, Released August 8, 1996, ¶ 447.

111 Verizon Special Access Tariff FCC No. 1, § 7.2.12(E).

112 Verizon Special Access Tariff FCC No. 1, § 7.2.12(F).

establish costs for interoffice dedicated transport for unbundling. Moreover, the FCC explicitly requires that the incumbents make DCS available in the same manner for unbundling that it makes it available for special access.[113]

Q. DO THE INTERCONNECTION AGREEMENTS BETWEEN AT&T AND VERIZON, AND WORLDCOM AND VERIZON GIVE THE CLECS THE OPTION OF PURCHASING DCS WITH DEDICATED TRANSPORT?

A. Yes. Attachment 2 § 10.3 of the agreement between AT&T and Verizon provides that dedicated transport includes DCS as an *option* where available. Similarly, Attachment 3, § 10.2.4 of the agreement between WorldCom subsidiary MCImetro Access Transmission Services, Inc. and Verizon requires Verizon to "offer DCS and multiplexing, both with and separately from Dedicated Transport."

Q. DOES THE NETWORK CONFIGURATION THAT VERIZON IS USING PERMIT IT TO SEPARATE DCS FROM THE DEDICATED TRANSPORT?

A. Yes. Based on the diagrams provided by Verizon with its cost study, Verizon always places DSX cross-connect points on each side of the DCS. As such, the dedicated transport, which appears at the DSX, can be readily separated from the DCS, which also appears at the DSX, so that the CLEC can either purchase dedicated transport with DCS (if DCS is available) or without DCS.

---

[113] FCC *First Report and Order*, FCC Docket No. 96-325, ¶ 444.

Q. HOW HAVE YOU RECALCULATED VERIZON'S COST STUDY TO CORRECT THIS ERROR?

A. We have stated the cost of DCS as a separate element. Effectively, we have taken Verizon's investments for DCS already included in its dedicated transport cost studies and separately developed the cost for this element based on the various port types available on DCS. We have made no underlying changes to Verizon's cost for DCS.

3. DEVELOPMENT OF MULTIPLEXING RATES

Q. DID VERIZON PROPOSE A RATE FOR MULTIPLEXING IN THIS PROCEEDING?

A. No.

Q. DID VERIZON PROVIDE UNDERLYING COSTS AND INVESTMENT DATA FROM WHICH RATES COULD BE GENERATED?

A. Yes. Verizon included the underlying equipment investment cost in its filing for Virginia. However, Verizon has not converted these equipment investment costs into proposed rates for Multiplexing.

Q. IS IT UNUSUAL THAT VERIZON DID NOT PROVIDE A COST FOR MULTIPLEXING?

A. Yes. In recent UNE cost proceedings in New York and in Massachusetts, Verizon provided costs for these elements in its cost studies and proposed rates for Multiplexing to those respective commissions.

Q. WHY ARE MULTIPLEXING RATES IMPORTANT?

A. Multiplexing enables the CLEC to take entrance facilities at lower transport speeds (*e.g.*,as DS1) and combine these together through unbundled access to multiplexing to take advantage of higher speed interoffice dedicated transport. Without Multiplexing, CLECs will be severely limited in the manner in which they can utilize interoffice dedicated transport.

Q. HOW HAVE YOU APPROACHED VERIZON'S FAILURE TO PROVIDE MULTIPLEXING RATES?

A. Our restatement of Verizon's cost in this proceeding includes Multiplexing costs in two forms: DS1 to DS0 Multiplexing and DS3 to DS1 Multiplexing, as Verizon did in similar proceedings. We rely on the underlying equipment investment costs Verizon has proposed in this proceeding before the FCC in making this cost calculation. The details for how the calculations were made can be found in our supporting work papers.

4. CORRECTION TO TRANSPORT EQUIPMENT IN-PLACE FACTOR

Q. FIRST, WHAT IS AN IN-PLACE FACTOR?

A. In most instances, Verizon has determined the material investment for each of the elements in its cost study. However, it has not separately identified the installation and miscellaneous costs necessary to put the material investment operation – or "in-place." The in-place factor is intended to gross up the material investment to represent the total installed cost of telecommunications equipment.

Q. WHAT IS THE IN-PLACE FACTOR FOR TRANSPORT EQUIPMENT PROPOSED BY VERIZON?

A. Verizon has proposed an in-place factor for transmission equipment of 53.2% in Virginia.

Q. WHAT IS YOUR CONCERN WITH THE IN-PLACE FACTOR USED BY VERIZON?

A. First, Verizon has used an in-place factor that is not representative of TELRIC cost for this element. In our experience, the in-place cost for transmission equipment should be in the 30% range. Verizon has proposed an in-place factor for transmission equipment of 53.2% in Virginia, which is significantly higher than any cost-based in-place factor we have seen. Second, Verizon has not separately identified the installation and miscellaneous costs that go into its in-place factor. It is therefore impossible to verify Verizon's claimed costs.

Q. WHAT IN-PLACE FACTOR WOULD YOU RECOMMEND FOR VIRGINIA?

A. In the New York UNE cost proceeding, Verizon presented a transmission equipment in-place factor of 36.4%.[114] There is no reason to believe that installation costs in Virginia should be 46% greater than the 36.4% factor used in New York. Verizon uses the same equipment vendors for transport equipment in New York as in Virginia, so it is unlikely that such a large difference is supportable. In short, in light of the large difference between Verizon's in-place factor in Virginia as compared to New York, we would recommend that the Commission use the value which Verizon presented in the New York proceeding.

---

[114] State of New York Public Service Commission, *Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements*, Case 98-C-1357, Workpaper Part C-1 – Section 1.0 to the Panel Testimony of Bell Atlantic – New York on Revised Costs and Rates for Unbundled Network Elements and Related Wholesale Services, February 24, 2000, p. 3. Please note that this exhibit can also be found as Exhibit 323 in the New York UNE cost proceeding.

C. SUMMARY OF CORRECTIONS TO VERIZON'S INTEROFFICE DEDICATED TRANSPORT COST STUDY

Q. COULD YOU PLEASE SUMMARIZE THE INTEROFFICE DEDICATED TRANSPORT RATES THAT RESULT FROM YOUR CHANGES TO VERIZON'S COST STUDY?

A. Yes. The following table summarizes the proposed rates for interoffice dedicated transport that are derived from our restatement of Verizon's cost study based on the criticisms and corrections identified above. These modifications also incorporate the annual cost factors and overhead factors addressed earlier in this testimony.

Rate Element	AT&T Monthly Rate	Verizon Monthly Rate
DS0 Dedicated Transport (Fixed)	$20.23	NA
DS0 Dedicated Transport (Per Mile)	$0.29	NA
DS1 Dedicated Transport (Fixed)	$43.66	$54.76
DS1 Dedicated Transport (Per Mile)	$2.46	$3.91
DS3 Dedicated Transport (Fixed)[115]	$198.88	$499.44
DS3 Dedicated Transport (Per Mile)	$33.53	$59.11
STS-1 Dedicated Transport (Fixed)[116]	$200.24	$502.99
STS-1 Dedicated Transport (Per Mile)	$33.61	$59.11
OC-3 Dedicated Transport (Fixed)[117]	$584.64	$1,441.40
OC-3 Dedicated Transport (Per Mile)	$102.95	$178.07

---

115 It is difficult to precisely compare the AT&T/WorldCom and Verizon proposed rates for dedicated transport in that Verizon has averaged DCS investment into its rates rather than allowing CLECs to elect this UNE if it wants to as does Verizon. Nonetheless, for DS3 dedicated transport, allowing CLECs to elect DCS accounts for 12.3% of the investment difference between AT&T/WorldCom and Verizon.

116 For STS-1 dedicated transport, allowing CLECs to elect DCS accounts for 12.2% of the investment difference between AT&T/WorldCom and Verizon.

117 For OC-3 dedicated transport, allowing CLECs to elect DCS accounts for 14.4% of the investment difference between AT&T/WorldCom and Verizon.

OC-12 Dedicated Transport (Fixed)	$2,578.58	$4,113.45
OC-12 Dedicated Transport (Per Mile)	$255.04	$390.84
Multiplexing DS1 to DS0 – Common	$167.56	N/A
Multiplexing DS1 to DS0 – Plug-In	$6.98	N/A
Multiplexing STS-1/DS3 to DS1	$259.36	N/A
Multiplexing STS-1/DS3 to DS1 – Plug-In	$9.26	N/A
DCS DS1 Port	$5.77	NA
DCS DS3 Port	$109.40	NA
DCS STS-1 Port	$109.40	NA
DCS OC-3 Port	$328.19	NA

D. VERIZON'S CLAIMED COMMON (SHARED) TRANSPORT COSTS

Q. WHAT IS THE RELATIONSHIP BETWEEN THE COST FOR COMMON TRANSPORT AND INTEROFFICE DEDICATED TRANSPORT?

A. Common transport is closely linked to the costs for interoffice dedicated transport. The trunks that are used to carry common transport are provisioned on dedicated transport circuits. As such, the underlying cost for dedicated transport directly relates to the costs that would be incorporated into the calculations for common transport. Of course, other issues also come into play with common transport in that the cost recovery for this element is not based on circuits, but on minutes. As such, the assumptions related to the number of minutes that will pass across a trunk provisioned over dedicated transport are critical factors in developing the cost for this element.

Q. WHAT CONCERN DO YOU HAVE WITH VERIZON'S COMMON TRANSPORT COST STUDY?

A. Verizon used as the underlying cost element for common transport the costs from the dedicated transport cost study for DS1 Dedicated Transport and STS-1 Dedicated Transport. Using these elements as the underlying cost for the transport in common transport is appropriate, but Verizon's cost study for common transport costs must be corrected to account for the same errors as in the dedicated transport cost study.

Q. COULD YOU PLEASE SUMMARIZE THE RESULTING RATES FOR COMMON TRANSPORT BASED ON YOUR MODIFICATIONS TO VERIZON'S COST STUDY?

A. Yes. The resulting rate for common transport is $0.000060 per minute of use – fixed and $0.000001 per minute of use per mile. This rate also reflects adjustments to the annual cost factors and overhead factors that are addressed in other sections of this rebuttal testimony.

E. CONCLUSION

Q. PLEASE SUMMARIZE THIS PART OF YOUR TESTIMONY.

A. Verizon has significantly overstated its forward-looking economic costs for dedicated interoffice transport and common transport. For dedicated interoffice transport, Verizon's understated the capacity of the SONET rings, thereby significantly overstating the costs for the circuits riding those SONET rings; improperly included DCS on most dedicated transport circuits regardless of whether the CLEC elects this element or not; used an inflated installation factor for transport equipment that is significantly higher than even Verizon has previously suggested is reasonable; and failed to develop multiplexing cost for DS1 to DS0 and DS3 to DS1 multiplexing. Finally, Verizon's cost for common transport, which is based on its underlying dedicated transport cost study, must be revised to correct the errors in that underlying study.

VI. ACCESS TO OSS COSTS

A. INTRODUCTION AND SUMMARY OF THIS PORTION OF THE TESTIMONY

Q. WHAT IS THE PURPOSE OF THIS PORTION OF YOUR REBUTTAL TESTIMONY?

A. In this section, we will rebut Verizon's Panel Testimony on Unbundled Network Element and Interconnection Costs. For certain of the adjustments proposed herein, we rely on concurrently filed reply testimony of AT&T/WorldCom witnesses Mr. Lee and Mr. Hirschleifer.

B. VERIZON'S "ACCESS TO OSS" CHARGE IS NEITHER COMPETITIVELY NEUTRAL NOR BASED ON FORWARD-LOOKING COSTS.

Q. PLEASE SUMMARIZE THE MAJOR CONCLUSIONS THAT YOU HAVE REACHED BASED ON YOUR REVIEW OF VERIZON'S ACCESS TO OSS TESTIMONY AND THE ASSOCIATED COST STUDIES.

A. With respect to Verizon's access to OSS cost studies and pricing recommendations, we have reached the following major conclusions:

- The one-time development costs in Verizon's "access to OSS" study are caused by the transition to a competitive environment, not by new entrants' orders for UNEs. Therefore, it is inappropriate to recover these costs solely from new entrants.
- Because new entrants incur costs for their own portion of the electronic gateway between their operation and Verizon's OSS, the simplest competitively neutral mechanism for cost recovery is to require each company to bear its own costs for access to OSS.

- The Commission should hold Verizon to a strict burden of proof in justifying recovery claims for modifications to Verizon's OSS. Verizon has not met this burden.
- If the Commission authorizes any explicit access to OSS charge, it should be calculated as a competitively neutral surcharge on all Virginia telecommunications users. Based on Verizon's reported access to OSS costs, an eight-cent per month per line surcharge would be sufficient to recover all of the alleged costs over a ten-year period.
- Even the eight-cent per month surcharge figure is likely too high, because Verizon's access to OSS cost study reflects embedded, rather than forward-looking costs, probably some double-counting with Verizon's recurring costs, and the costs of potentially duplicative or obsolete systems. Of course, if the Commission adopts our primary recommendation to have each carrier bear its own access to OSS costs, there is no need to resolve these issues because Verizon will bear any costs attributable to its own inefficiencies.
- Ongoing OSS expenses are a normal cost of business and should be recovered in the same way Verizon captures all normal forward-looking recurring OSS expenses, through its annual cost factors.

Q. WHAT DOES VERIZON PROPOSE FOR "ACCESS TO OSS"?

A. Verizon proposes to apply a recurring "Access to OSS" charge of $0.87 per month per line to all UNE loops, UNE platforms and resale loops.[118] Verizon designed this charge to recover: "(1) initial development costs to make ... access to Verizon VA's operations support systems possible; and (2) the associated recurring capital costs and ongoing maintenance expenses associated with provisioning OSS Access on an ongoing basis."[119] We will address separately the appropriateness of each of these categories of purported costs and Verizon's proposed recovery mechanisms.

1. VERIZON'S PROPOSED ACCESS TO OSS CHARGE DOES NOT RECOVER COMPETITION-ONSET COSTS IN A NEUTRAL FASHION

Q. WHAT INITIAL DEVELOPMENT COSTS HAS VERIZON INCLUDED IN ITS PROPOSED ACCESS TO OSS CHARGE?

A. Verizon estimates that it has incurred $227 million in one-time development costs over its entire Verizon–East footprint[120] for which it seeks recovery over a ten-year period. These one-time development costs account for 44% of Verizon's proposed Access to OSS charge. According to Verizon's cost panel, these one-time development costs include expenses associated with developing new system

---

118 Verizon has proposed a separate Line Sharing OSS charge of $0.84 per line per month, which would apply to both line sharing and line splitting lines. The AT&T/WorldCom Panel on Non-Recurring Costs and Advanced Data Services addresses this proposed charge in its concurrently filed reply testimony.

119 Verizon Cost Panel Direct at 242-243.

120 *Id.* at 245.

interfaces or gateways and modifying the underlying core systems to accommodate the new interfaces/gateways (including capitalized software costs), as well as expenses associated with defining the methods and procedures for OSS access.[121]

Q. IS IT APPROPRIATE TO RECOVER THESE INITIAL DEVELOPMENT COSTS IN UNE CHARGES, AS VERIZON PROPOSES?

A. No. The initial development costs that Verizon included in its study are costs attributable to the transition from a monopoly to a competitive environment. The need to develop gateways arises from the legal requirement that incumbent local exchange carriers, who previously operated in a single carrier environment, open their existing OSS to access by multiple, competing carriers. In this case, the government mandate results in what can be called "competition-onset costs," (sometimes known as competition implementation costs). By attributing these costs solely to new entrants, Verizon, in effect, misidentifies the cost causers.[122]

Q. WHY IS IT INAPPROPRIATE FOR VERIZON TO RECOVER COMPETITION-ONSET COSTS THROUGH UNE CHARGES?

A. There are several reasons why the charges for unbundled network elements, whether recurring or non-recurring charges, should not provide for the recovery of Verizon's competition-onset costs. First, such charges would create a formidable

---

121 *See id.* at 273.

122 In addition, Verizon has not distinguished between the costs to develop access to OSS for resale and those for unbundled network elements. Therefore, competitors that purchase only unbundled network elements would have to bear the costs of developing resale OSS that they could not possibly have caused.

barrier to entry by allowing Verizon, solely because of its control over bottleneck monopoly inputs, to pass these costs on to new entrants who must also cover their own competition-onset costs.

Second, to allow Verizon to pass these costs on to new entrants allows Verizon to recover costs it inefficiently incurred. In this case, Verizon's expectation that it would be able to pass along OSS development costs to competitors created an incentive for it to comply inefficiently. Competitors should not now be asked to bear the cost of that inefficiency.

Third, Verizon's one-time development costs are not the forward-looking costs of providing an element, but rather costs Verizon has already incurred to transition to a competitive market.

Q. HOW WOULD ALLOWING VERIZON TO IMPOSE ITS COMPETITION-ONSET COSTS ON NEW ENTRANTS CREATE A BARRIER TO ENTRY?

A. Verizon's methodology would make new entrants and their customers entirely responsible for effectively paying the costs to make competition possible in Virginia. Requiring new entrants to shoulder all of Verizon's OSS-related costs for the transition to a multi-provider marketplace would impose a disproportionate burden on new entrants (who themselves concurrently incur costs to exchange pre-ordering, ordering, provisioning, maintenance and repair, and billing data with Verizon electronically). If Verizon's proposal was adopted with respect to gateway costs, *the new entrant would have to pay to develop two gateways, while Verizon would pay for none*. That is, new entrants would have to bear costs that Verizon did not and does not bear. This is the classic definition of a barrier to entry. Such a barrier would deter the very competitive entry that the legal requirement for access to Verizon's OSS is intended to foster.

Q. HOW CAN THE COMMISSION AVOID CREATING SUCH A BARRIER TO ENTRY?

A. The Commission can avoid creating an unnecessary barrier to entry by properly classifying Verizon's reported one-time developments costs for access to OSS as competition-onset costs and recovering those costs in a competitively neutral manner.

Q. CAN YOU PROVIDE EXAMPLES OF COMPETITIVELY NEUTRAL COST RECOVERY MECHANISMS BY WHICH TO RECOVER COMPETITION-ONSET COSTS?

A. Yes. The simplest and arguably most fair mechanism is to have each market participant bear its own costs for the gateway systems that are necessary to permit new entrants to access Verizon's OSS. As we have already noted, Verizon is not the only carrier that incurs costs to create the necessary electronic gateways; every new entrant that seeks to establish electronic access to Verizon's OSS also incurs costs for its end of the gateway and for training its personnel on the use of Verizon's systems. Thus, the Commission should not approve any explicit charge for access to OSS, but rather *have Verizon and each entrant bear its own costs* for the gateway(s).

In the alternative, the Commission could calculate a per-line surcharge that would be the equivalent of recovering Verizon's prudently incurred access to OSS costs from all Virginia end-users, whether they subscribe to Verizon's local exchange service or that of a competitor. New entrants would pay this surcharge to Verizon directly, on behalf of their end users. Verizon would have the option of absorbing its pro rata share of the competition-onset costs or seeking authority from state regulators to pass the surcharge along to its end-user customers in Virginia.

Q. IF EACH CARRIER PAYS THE COST OF CREATING ITS OWN GATEWAY, CUSTOMERS OF VERIZON WHO CHOOSE NOT TO SWITCH CARRIERS MAY BE ASKED TO BEAR COSTS FOR A GATEWAY DESIGNED TO PROMOTE COMPETITION. IS THIS REASONABLE?

A. Yes. The creation of a gateway is a necessary condition for the move to a multi-provider competitive local exchange market. All consumers, whether they choose to change carriers or not, will be the beneficiaries of the existence of local competition. Incumbents such as Verizon will have to compete on price and service quality with new entrants; customers who remain with Verizon will benefit from the lower prices, greater array of services, and more rapid introduction of technology that competition will compel. Thus, because all consumers – including those of Verizon – will benefit from ensuing competition, it is perfectly reasonable to expect them to bear some of the cost of the gateway that is a necessary adjunct to the creation of a competitive marketplace.

Q. WOULD THE ALTERNATIVE END-USER SURCHARGE YOU DESCRIBE IMPOSE A DISPROPORTIONATE BURDEN ON VERIZON OR ITS VIRGINIA RETAIL CUSTOMERS?

A. No, it would not. Once again, all Virginia customers benefit from the creation of conditions that make local exchange competition in Virginia possible, whether they are Verizon customers or customers of a new entrant. The requirement that Verizon provide electronic access to its OSS to all local exchange providers is one of the conditions necessary to make a multiple provider environment workable, much like the requirement for number portability. The surcharge mechanism that we have described is analogous to competitively neutral mechanisms that have already been approved for the recovery of number portability costs, and does not impose a disproportionate burden on Verizon. If anything, because new entrants will have to bear all of their own costs for electronic access to OSS plus a share of the surcharge, Verizon's burden under this method of cost recovery is disproportionately light. That is one reason why our primary recommendation is for each company to bear its own costs.

Moreover, the Commission should recall that Verizon stands to benefit significantly from fulfilling the requirements of the competitive checklist for entry into the interLATA market. Providing access to its OSS is one such requirement. Passing through a small monthly surcharge to its local exchange customers is little or no burden on Verizon compared to the advantage of interLATA entry.

Q. WHAT LEVEL OF SURCHARGE WOULD BE NECESSARY TO RECOVER THE COSTS IN QUESTION?

A. For purposes of illustration, we will assume that all of the one-time costs reported in Verizon's access to OSS cost study are prudently incurred costs that should be eligible for recovery through an end-user surcharge (a conjecture that Verizon has by no means proven, as we discuss below). We will further assume that the surcharge will apply for ten years, the same period over which Verizon proposes to amortize its one-time development costs for access to OSS. Given Verizon's current number of access lines,[123] the initial monthly surcharge needed to recover all of Verizon's reported one-time development costs would be approximately $0.08.[124] Because Verizon's total one-time costs do not vary, the monthly surcharge would decrease over time as the number of access lines grows.

As this example demonstrates, a competitively neutral surcharge would impose a manageable price on all Virginia telecommunications users for the benefits of creating a competitive local exchange environment that can bring down prices and increase service quality and choices for all consumers. In contrast, Verizon's prohibitively high proposed charges would stifle competition.

Q. ARE THERE ANY PRECEDENTS FOR THE TREATMENT OF OSS GATEWAY COSTS AS COMPETITION-ONSET COSTS THAT SHOULD BE RECOVERED IN A COMPETITIVELY NEUTRAL MANNER?

A. Yes. There are at least three precedents. First, the California Public Utilities Commission has required Pacific Bell and GTE California, Inc. (now a Verizon affiliate), to seek recovery of their OSS gateway costs through competitively neutral local competition implementation charges, not charges to competitors.[125]

---

[123] We used Verizon's current number of access lines for June 2001 (*see* Verizon Maryland's Response to AT&T 6-53 and 6-54, Public Service Commission of Maryland Case 8879). Verizon has presented its access to OSS implementation costs on a regional basis and has proposed spreading some portion of the costs over the demand in Verizon-East-South and some portion over the demand for all of Verizon-East. For the purpose of this calculation, we have not changed Verizon's approach, just the demand over which the costs are spread.

[124] This estimate incorporates corrections to Verizon's factors discussed elsewhere in this testimony.

[125] CPUC D.98-12-079 at 47-48 (footnote omitted). A settlement allowing Verizon to recover a part of its claimed one-time local competition implementation costs through a surcharge on all of its customers is now pending before the California PUC. The

(footnote continued)

A second precedent for requiring incumbents to bear the costs of their own OSS gateways is an order of the New York Public Service Commission ("NYPSC"). In its Opinion No. 97-19, the NYPSC agreed with AT&T that "the law [the Telecommunications Act of 1996] would have required these steps [enhancements to OSS to permit multi-provider access] even if no CLEC were to use OSSs."[126] Moreover, although the NYPSC did not issue a final ruling on the cost recovery issue because it disallowed all of New York Telephone's proposed costs for access to OSS pending a further showing, it noted that "the recommended decision [of the Administrative Law Judge in the same proceeding] found a 'fair case' for spreading OSS development costs over the entire industry, incumbent carriers included, rather than recovering them solely from competing local exchange carriers."[127]

Finally, the treatment that we propose for OSS gateway costs is directly analogous to the treatment that the Commission has prescribed for number portability costs. In its Third Report and Order in CC Docket No. 95-116, the Commission directed that incumbents may recover their costs of implementing local number portability from their end-users. Incumbents are not to recover local number portability implementation costs from the new entrants. Like number portability, the OSS gateway is a cost that an incumbent such as Verizon must

---

assigned Administrative Law Judge issued a draft decision approving the settlement on August 16, 2001.

126 NYPSC Opinion and Order in Phase 2 of Cases 95-C-0657 *et al.*, at 14.

127 *Id.* at 15.

incur to meet its legal obligations to enable local competition – in other words, a competition-onset cost. The Commission has applied a two-pronged test to determine whether both interim and long-term number portability costs are being borne in a competitively neutral manner.[128] The test requires that the method for recovering costs: "(1) must not give one service provider an appreciable, incremental cost advantage over another service provider when competing for a specific subscriber; and (2) must not disparately affect the ability of competing service providers to earn a normal return."[129] Our proposal for recovering the costs of OSS gateways meets these criteria because all carriers will bear the costs of their own OSS gateways and have to recover those costs from their retail customers, whereas Verizon's proposal does not.

Q. ARE THERE OTHER REASONS THAT THE COMMISSION SHOULD NOT ALLOW VERIZON TO FORCE NEW ENTRANTS TO PAY FOR ITS COMPETITION-ONSET COSTS?

A. Yes. If new entrants were to pay for Verizon's competition-onset costs, including the gateway Verizon developed, there is virtually no chance that Verizon would select the most efficient means for complying with the mandate to open its markets to competition. Verizon does not want entry. If it can comply with the mandate at high cost but force new entrants to pay the cost, it is much less likely to face effective competition. The only way to create an incentive for Verizon to

---

[128] Third Report and Order, *In the Matter of Telephone Number Portability*, CC Docket No. 95-116, adopted May 5, 1998, rel. May 12, 1998, ¶¶ 53-4.

[129] *Id.* at ¶ 53.

comply with the mandate to open its markets to competition in the most efficient manner possible would be to force Verizon to bear the cost of creating its own gateway.

In this case, Verizon's expectation that it would likely be able to pass along its costs of developing new gateways created such an incentive for inefficiency. Indeed, Verizon did not proceed with development as efficiently as it might have. Instead, it resisted the development of gateways and functionalities for competitors repeatedly, slowing and complicating their development. Competitors should not now be asked to bear the cost of that inefficiency. Furthermore, Verizon now has an incentive to inflate the magnitude of the costs it incurred to develop the gateways. Verizon's documentation in this proceeding is far from sufficient to determine if Verizon has acted on that incentive. Any costs for elements that Verizon expects to impose solely on competitors are an opportunity for it to disadvantage competitors, and, as such, require a much higher level of scrutiny than Verizon has allowed here.

Q. DO THE INITIAL DEVELOPMENT COSTS PRESENTED BY VERIZON COMPLY WITH FORWARD-LOOKING ECONOMIC PRINCIPLES?

A. No. Verizon's study unquestionably violates TELRIC principles in fundamental respects. First, it measures *actual incurred* costs rather than the forward-looking costs that would be incurred in a reconstructed network. Verizon's study is based for the most part on costs that were actually incurred in 1996, 1997, 1998 and 1999. Nonetheless, the company asserts these "costs were forward-looking at the time they were incurred"[130] and therefore are appropriate for inclusion in a forward-looking study. This statement reveals a deep misunderstanding of the economic meaning of forward-looking costs. Under this logic, it is difficult to see what embedded investment Verizon would not consider to be "forward-looking." Yet that clearly is not the intent of the Commission's TELRIC methodology. Ms. Murray discusses Verizon's misunderstanding of TELRIC in her concurrently filed rebuttal testimony on economic and policy issues.

Instead, Verizon should have determined the forward-looking costs that an efficient provider would incur to build its OSS using the best available technology. In a reconstructed local network, Verizon would design its OSS to accommodate multiple providers from the start. Neither the entire capital cost of those OSS nor the ongoing maintenance cost for such systems would be attributable solely to competitors.

Q. WHAT ARE THE DOCUMENTATION PROBLEMS TO WHICH YOU ALLUDED?

A. The information provided by Verizon is woefully insufficient to permit parties or the Commission even to verify the level of the claimed costs, much less to determine their appropriateness. Verizon has provided access to OSS cost data only on the most aggregate level. It has made no attempt to break out the costs associated with particular efforts or projects. Verizon's own witness on its

---

130 Verizon Cost Panel Direct at 247.